

CLAIMS

1. An apparatus for the measurement of a spectrum said apparatus including;
a CCD array including a plurality of individual detectors, each said detector
producing a signal dependent in part on the amount of light measured by
said detector;
a database of the signal measured by each said detector when no light has
fallen on said detector; and
a signal correction device that reduces the signal measured by each said
detector by the dark signal to produce a corrected signal for each said
detector.
2. An apparatus for the measurement of a spectrum as in Claim 1 wherein
said apparatus includes a temperature-measuring device adapted to
measure the temperature of said array, said database including the dark
signal for each detector measured at several different temperatures.
3. An apparatus for the measurement of a spectrum as in any one of the
above claims wherein said apparatus includes a time calculating device
said database including the dark signal for each detector measured at
several different temperatures.
4. A method of correcting the signal of each detector in a CCD array
measuring a light distribution across the array said method including the
steps of:
measuring the dark signal of each detector when no light is falling onto said
detector and storing said dark signal in a database;
measuring the signal of each detector with light falling onto said array; and
removing the dark signal for each detector from the measured light signal
to provide a corrected spectrum.
5. A method of correcting the signal of each detector in a CCD array
measuring a light distribution across the array as in claim 4 wherein said
method further includes the steps of:
(a) measuring the dark signal of each detector at a first temperature;
(b) storing the dark signal for each detector for said first temperature in a
database;

(c) varying the temperature of said array to a second temperature;
repeating steps (a) to (c) for a number of different temperatures.

- 5 6. A method of correcting the signal of each detector in a CCD array
measuring a light distribution across the array as in claims 4 or 5, said
method including the steps of:
measuring the temperature of the array when measuring a light distribution;
recalling the dark signal for each detector stored in said database
representative of said measured temperature; and
10 subtracting the recalled dark signal from the database for each detector
from the measured signal of each detector.
7. A method of correcting the signal of each detector in a CCD array
measuring a light distribution across the array as in any one of claims 4 to 6
wherein said method further includes the steps of taking the dark signal
measurement over a pre-determined period.
- 15 8. A method of correcting the signal of each detector in a CCD array
measuring a light distribution across the array as in claims 6 or 7 wherein
said database is provided in a memory means located on said CCD array.
9. A method as in any one of claims 6 or 8 wherein said dark signal stored in
said database is an average of a plurality of dark signals measured over
20 said time and temperature.
10. A method as in any one of claims 6 to 9 wherein said database is provided
on a CD or other storage media.
11. An apparatus for the measurement of a spectrum substantially as
hereinbefore described with reference to the Figures.
- 25 12. A method for the measurement of a spectrum substantially as hereinbefore
described with reference to the Figures.